



## ***SHARE Everest 2011 – Italian science is back onto the roof of the world***

*Press release, April 20<sup>th</sup> 2011*

**ROME -- Back to 8000 m of height on Mt. Everest, to re-instate the South Col weather station installed in 2008 by the EvK2Cnr Committee: flagship of the SHARE (Stations at High Altitude for Research on the Environment) International Environmental Project, the South Col Automatic Weather Station (AWS) is the first weather station in the world providing weather measurements at such an altitude. The mission, which is carried out in close co-operation with the Italian Minister for Education, University and Research (MIUR) and the National Research Council (CNR), was presented on April 20<sup>th</sup>, in a press conference in Rome, where Minister of University, Education and Research, Mariastella Gelmini said herself proud of a project like SHARE, which is going to bring, once more, the Italian excellence in high-altitude scientific research up to the highest mountain in the world, in the 150<sup>th</sup> anniversary of Italy's national unification. The project falls within the collaboration between EvK2Cnr and the Nepal Academy of Science and Technology (NAST), and was approved during the Bilateral technical committee of March, 24 2011.**

The South Col mission has left Italy on April 22<sup>nd</sup>, and will be back to Italy in early June. Expedition chief is Agostino Da Polenza, EvK2Cnr Committee's president, who will co-ordinate the works from the Pyramid Laboratory-Observatory, installed at 5050 m a.s.l. on the Everest slopes. On the field there will be Gianpietro Verza (person in charge of EvK2Cnr's monitoring stations) and mountaineers Daniele Bernasconi, 39, president of the Ragni di Lecco mountaineering society, and Daniele Nardi, 35, from Sezze in Latium region. They will have the task of working at 8000 m of height to re-install the weather station, and to report about the mission with images and pictures. The scientific supervision is in the hands of Paolo Bonasoni (the SHARE Project coordinator) and of Elisa Vuillermoz (in charge of EvK2Cnr's environmental projects).

The press conference was opened by Agostino Da Polenza, EvK2Cnr Committee's president, who presented the expedition, followed by Enrico Brugnoli, director of CNR Earth and Environment Department, who spoke about high-altitude environmental monitoring, an Italian excellence in world's research. Paolo Bonasoni introduced the SHARE Project and opened a live connection with the Pyramid Laboratory, 5050 m a.s.l. in Nepal, where Gianpietro Verza is currently working with a group of the SHARE researchers.

“You reach points of excellence not only because you are at such a high altitude – Minister Mariastella Gelmini said, talking live with the Pyramid – but because the scientific results you are able to produce are of absolute excellence. We are proud of you, because you are bringing Italian expertise all over the world”.

The Minister, after congratulating Gianpietro Verza and the EvK2Cnr's team, asked Angela Marinoni, CNR ISAC researcher for SHARE, how they are spending their time at more than 5000 m of height. "It is really impossible to get bored – Marinoni replied – the job is plentiful and intense and the days are full with the monitoring, checking and calibration of the instruments, which are very delicate".

"Heartfelt congratulations for such an undertaking – the Minister added – Italy is proud of being internationally represented by such a Project which was conceived in Italy, encompasses international institutions and universities, creates synergies and yields to tangible outcomes also on our territory. SHARE is a project which allows us to promote our technologies. Seeing you there on the Everest with the Italian flag behind your shoulders is a source of pride for us all."

"Yesterday the National Research Plan was presented: – Minister Gelmini concluded – it is the steering instrument of scientific research and it was bound to include the SHARE Project, which is so apt in creating international synergies and in proving how our Country can produce such exceptional talents. Therefore, as a Minister, I am deeply grateful to you all for your passion and dedication. Share is a jewel for research, and research should have more space on the media."

But what will be, in the practice, the target of the Share Everest 2011 mission? "The mission will re-install the weather sensor at South Col – ISAC CNR Paolo Bonasoni, coordinator of the Share project, explains – where we already performed some tests for some months in 2008. It is a unique station, if you consider the 8000 m asl altitude, and it is particularly important because it will be able to record information in continuous, which will make it possible to perform direct analyses and comparisons with other analyses. These measurements at the South Col can, moreover, provide us with information regarding the presence of an intense Western atmospheric current (the Subtropical Jet Stream) over the Himalayas. The yearly variability of such a jet stream is used as an indicator of the onset and the end of the summer monsoonal circulation. Moreover, this current influences episodes of transport of stratospheric masses to the troposphere, as shown by the analyses performed at the Nepal Climate Observatory – the Pyramid (NCO-P). at the same time, the South Col station becomes the endpoint of a network of measurement sites all over the Khumbu Valley starting from Lukla, 2500 m asl, to other 7 sites, encompassing the Pyramid, with the NCO-P. The NCO-P itself, last year, obtained the status of global station in the frame of the Global Atmospheric Watch (GAW) Programme of the World Meteorological Organization (WMO), thus becoming the 33<sup>rd</sup> monitoring focal point for the Earth's atmospheric composition: the highest point in this network, and the first Italian one, although beyond the national borders, to obtain such a prestigious status".

Thanks to the integration of the information originating at the South Col and that coming from the Khumbu Valley Share station network, the Share project positively contributes to the improvement of studies on the atmospheric circulation at an international level.

The reinstatement of observations at the South Col will take place by means of the re-installation of a station which will provide meteorological data from the roof of the world in real time, thus creating a continuous and unique flux of data, of a pre-eminent importance for a better characterization of the Himalayan climate. The South Col station will be equipped with new and technologically-advanced sensors for measuring temperature, humidity, wind speed and direction, whereas the sensors from the previous installation will be used for measuring pressure and radiation. Support and energy supply systems will be optimized, and the transmission system will be re-established, considering its good functioning during the 2008 test campaign.

Among the most surprising results of the Share project's first 5 years are the concentration levels of pollutants, which are typical of urban environments, recorded at 5079 m asl at the NCO-P, and the high temperatures at South Col's 8000 m, which will be better investigated thanks to the new instrumentation installed in the present mission. These are worrying signals of the climate on the Himalayan peaks, also because the deposition of such pollutants on the Himalayan glaciers can create the conditions for a significant speeding of their natural melting.

In these days, EvK2Cnr, Cnr-Isac and Cnrs-Lgge researchers are performing a field campaign in the Himalayas for the calibration, the testing and the fine tuning of the instruments installed at the NCO-P in 2006 as well as in the Khumbu Valley stations and at the Pyramid. From a preliminary analysis of the observations performed at the NCO-P in this period we can hypothesize that, for the first time since the inception of these measurements, the direct contribution of the Atmospheric Brown Cloud seems to be less evident with respect to the previous years, at least until now, thus indicating a possible interannual variability that should be investigated further.

New atmospheric observations are being scheduled for the nearest future at the Pyramid Observatory: these observations are related to the monitoring of mercury, and they will be performed in cooperation with the Institute for Atmospheric Pollution of the CNR. The monitoring of mercury performed at NCO-P, besides representing the highest point of climate measurements, will provide a fundamental contribution for the study of processes influencing mercury at a global scale, and therefore for the definition of its impacts on water and land ecosystems. These study will be encompassed in the Gmos – Global Mercury Observation System – European project which, among its objectives, has the creation of a global observation system for monitoring the modulations of mercury atmospheric pollution.

The EvK2Cnr Committee has been committed in high-altitude scientific research for 20 years and has created the Share (Stations at High Altitude for Research on the Environment) project, an observational network for climate and environmental monitoring in cooperation with Unep, Wmo, Nasa, Esa and Iucn.

The Share Everest 2011 expedition will be followed in the field by Rai with the journalist Stefano Curone and by a troupe of Sky, composed by Federico Leoni and Daniele Moretti.

**Share Everest 2011: follow the expedition live on [www.montagna.tv](http://www.montagna.tv) and [www.Share-everest.org](http://www.Share-everest.org).**

*The Share Everest 2011 expedition is an EvK2Cnr initiative, in the frame of the celebrations for the 150 years of the Italian Unification, in co-operation with the MIUR and CNR.*

*Media Partners: RAI, Sky TG 24, RMC and Montagna.tv.*

*Technical support: GRIVEL*

**For further details on the ongoing calibration mission in Nepal: <http://www.montagna.tv/cms/?p=33905>**

**For further details on the environmental medicine research in Nepal: <http://www.montagna.tv/cms/?p=33908>**

**ATTACHMENTS:**

**Photos:**

Take a look and download the pictures from the “Share Everest 2011 Launch” gallery at the link:  
<http://www.montagna.tv/cms/?p=34042>

**Share Everest 2011 Launch video; direct download at the following ftp:**

Host: ftp3.evk2cnr.org

User: evk2cnrftp3

Password: kondor77

Web access: <http://www.ftp3.evk2cnr.org/>

In the Share Everest 2011 folder you will find two identical files, a very-high-resolution one in .avi format (for tv’s), and another in .mp4 format, still at high resolution, but quicker to download (for all other purposes).

Archive vids freely downloadable at the following link:

*1) PYRAMID LABORATORY*

The Pyramid Laboratory

[http://www.montagna.org/montagnaftp/evk2cnr/Piramide\\_EvK2CNR.avi](http://www.montagna.org/montagnaftp/evk2cnr/Piramide_EvK2CNR.avi)

[http://www.montagna.org/montagnaftp/evk2cnr/Piramide\\_bella.avi](http://www.montagna.org/montagnaftp/evk2cnr/Piramide_bella.avi)

The Cimel sensor, recording the composition of the Brown Cloud next to the “Nepal Climate Observatory – the Pyramid” of the Pyramid Laboratory, on Mt Everest:

[http://www.montagna.org/montagnaftp/evk2cnr/PiramideABC\\_SensoreCimel.avi](http://www.montagna.org/montagnaftp/evk2cnr/PiramideABC_SensoreCimel.avi)

The monitoring station installed at 5079 m asl on Mt Everest, next to the Pyramid Laboratory:

[http://www.montagna.org/montagnaftp/evk2cnr/stazioneabc\\_interno.avi](http://www.montagna.org/montagnaftp/evk2cnr/stazioneabc_interno.avi)

<http://www.montagna.org/montagnaftp/evk2cnr/stazioneabc.avi>

[http://www.montagna.org/montagnaftp/evk2cnr/piramide\\_staz\\_meteo.mpg](http://www.montagna.org/montagnaftp/evk2cnr/piramide_staz_meteo.mpg)

A team of researchers reaching the Pyramid Laboratory:

[http://www.montagna.org/montagnaftp/evk2cnr/Piramide\\_arrivoricercatori\\_lami.avi](http://www.montagna.org/montagnaftp/evk2cnr/Piramide_arrivoricercatori_lami.avi)

*2) BROWN CLOUD*

The cloud of pollutants detected in the Everest valley, next to the Pyramid Laboratory.

[http://www.montagna.org/montagnaftp/evk2cnr/piramide\\_nubemarrone.mpg](http://www.montagna.org/montagnaftp/evk2cnr/piramide_nubemarrone.mpg)

*3) SHARE EVEREST 2008 – SOUTH COL STATION*

Share Everest 2008: the story

[http://www.evk2cnr.org/Shareftp/1luglio/serata\\_Share\\_timeline.mpg](http://www.evk2cnr.org/Shareftp/1luglio/serata_Share_timeline.mpg)

Everest Base Camp – Share Everest station mounting tests

<http://www.evk2cnr.org/Shareftp/12may8-BC-HQ.wmv>

Video of the installation at the Everest South Col (8000 m asl)

[http://www.montagna.org/montagnaftp/evk2cnr/colle\\_sud.avi](http://www.montagna.org/montagnaftp/evk2cnr/colle_sud.avi)

<http://www.evk2cnr.org/Shareftp/COLLESUD16maggio/videocolle.MOV>

View of Mt. Everest and South Col

[http://www.evk2cnr.org/Shareftp/everest\\_campo3.mpg](http://www.evk2cnr.org/Shareftp/everest_campo3.mpg)

View of the Everest and South Col from the Kala Patthar weather station (installed at 5600 m asl: it receives data from the South Col and transmits them to the Pyramid)

<http://www.evk2cnr.org/Shareftp/COLLESUD16maggio/kpt60.mpg>

<http://www.evk2cnr.org/Shareftp/Kalapattar/KPaws.mpg>

Share Everest 2008: the President of the Republic Giorgio Napolitano with Agostino Da Polenza, Silvio Mondinelli and the Italian flag:

[http://www.montagna.org/montagnaftp/evk2cnr/Mondinelli\\_band\\_Napolitano.jpg](http://www.montagna.org/montagnaftp/evk2cnr/Mondinelli_band_Napolitano.jpg)

Pyramid, Gianpietro Verza explains the Share Everest expedition

<http://www.evk2cnr.org/Shareftp/seminario.wmv>

Share Everest 2011 is project by



Within the celebrations for the 150th Anniversary of the Unification of Italy  
in collaboration with MIUR and CNR



And in collaboration with Nepal Academy of Science and Technology



Media Partner

